

The Case of Tomato in Ghana: Institutional Support

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THE GHANA STRATEGY SUPPORT PROGRAM (GSSP) WORKING PAPERS

ABOUT GSSP

IFPRI's Ghana Strategy Support Program (GSSP) was launched in 2005 to address specific knowledge gaps concerning agricultural and rural development strategy implementation, to improve the data and knowledge base for applied policy analysis, and to strengthen the national capacity for practical applied policy research. The primary objective of the Ghana Strategy Support Program is to build the capabilities of researchers, administrators, policymakers, and members of civil society in Ghana to develop and implement agricultural and rural development strategies. Through collaborative research, communication, and capacity-strengthening activities and with core funding from the U.S. Agency for International Development/Ghana (USAID), GSSP works with its stakeholders to generate information, improve dialogue, and sharpen decisionmaking processes around the formulation and implementation of development strategies.

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Introduction

Ghana's commitment to the tomato sector has its roots in the 1960s when three large tomato processing plants were established in the country. Though set up as part of President Nkrumah's development plan for Ghana, the current rationale for these processors typically is that they could be a solution to the perennial "gluts" in the tomato sector. And indeed processing to reduce gluts remains a popular refrain in the media and in government pronouncements. However, since they were opened, the processors have run considerably under capacity, if at all. Over the past two decades processing has all but stopped; yields and production of fresh tomato in Ghana have stagnated and possibly fallen; while in parallel, imports of fresh tomato from Burkina Faso and tomato paste from the EU and China have increased dramatically. There are limited time-series or recent data on yields, areas, or overall production of tomato. Data collection at the national level for tomato and other vegetables by SRID/MoFA stopped at the end of the 1980s, reflecting a lower commitment to vegetables than the main food security staples. Good research into the tomato sector has been funded and undertaken, but in isolation of any commitment to follow through with project recommendations. Against this backdrop, we consider the role of various institutions in agriculture, and specifically in Ghana's tomato sector.

The role of the state in the agricultural sector

There is some consensus that the role of the state in agriculture should be one of policy making and regulation, to correct for market failure and distributional issues (IAASTD SSA Chapter 5). Gabre-Madhin and Haggblade (2001) stress the importance of developing key agricultural support institutions, whilst Faaland and Parkinson (1991) state that "it is undesirable for the state to involve itself directly in agricultural production unless it is very sure that it has the capacity to make its entrepreneurial activities a success." And that "instead, the state should attempt to provide the social environment and infrastructure that are conducive to agricultural development."

More specifically, Wiggins (1995) suggests a number of actions for African governments to improve their agricultural sectors that include emphasizing the freeing up of bottlenecks in input and marketing channels as a substitute for more tricky market liberalization; investing in rural infrastructure; and facilitating agricultural intensification including offering farmers a menu of technical options supported by research and development. ODI emphasizes the importance of defining the boundary between public and private roles for agriculture, and understanding the role of agriculture in the specific country. Specific activities stressed as important for ministries of agriculture include focusing on competitiveness of the sector, including the ability to compete with imports, and emphasizing the development of supply chains.

Ghana's direct public sector efforts to support and improve the tomato sector have very much focused on value-addition and large-scale processing in particular. With the exception of investments in irrigation, particularly in the northern regions, that benefit agriculture in general, there has been much less focus on tomato production and productivity, and no sustained effort to ensure viable and competitive tomato production to provide the input required at a competitive price by the tomato processors. As a consequence, despite significant investments by successive governments in large-scale processing, Ghana's farmers have not been able to produce tomato at sufficiently high levels of output, at sufficiently low cost, and at sufficiently high quality, to enable domestic processing to be competitive with imported tomato paste.

Specific interventions in the sector began with the establishment of tomato processing plants soon after independence

In the 1960s, as part of President Nkrumah's government's overall development plan for Ghana (Ablorh-Odjidia 2003), three state run agro-processing enterprises were set up: the GIHOC cannery at Nsawam (Eastern region), Pwalugu Tomato Factory at Pwalugu (Upper East region) and the GIHOC Tomato Cannery -TOMACAN of Wenchi (Brong Ahafo region). By the late 1980s, a combination of structural reforms promoted by the World Bank and IMF; frequent breakdowns resulting from a lack of spare parts and obsolete machinery; lack of technical competence and financial management; and poor marketing, resulted in the closure of these three factories. Since the 1980s the government has made several efforts to re-start large-scale domestic tomato processing, through its attempts to revive the Wenchi processor through a public-private partnership (PPP) and its most recent efforts to re-open the Pwalugu (Northern Star) processor in the Upper East region.

PPP at Wenchi, Brong Ahafo

By the late 1980s, TOMACAN of Wenchi – originally called the GIHOC Tomato Cannery – was no longer active. Under the platform of a “Public-Private Partnership,” four organizations, the German Technical Cooperation (GTZ), Brong Ahafo Regional Directorate of Ministry of Food and Agriculture (MoFA), Unilever Ghana Limited (Unilever) and Afrique Link Limited (ALL) promoted a pilot project to explore the commercial viability and sustainability of establishing a formal value-chain relationship in the tomato industry in Ghana. The project concept was for the public enterprises to assist the farmers to grow fresh tomatoes; for ALL to process into tomato paste and tomato pulp; and for Unilever to market and sell the tomato paste and assist ALL to sell and market the tomato pulp through its distribution system.

The process began with GTZ's efforts in the region. GTZ was already established in the region, working through MoFA in assisting farmers through its Sedentary Farming Systems Project (SFSP) to practice sustainable and good agricultural practices. Although tomato yields had increased, farmers were unable to access markets during the peak harvest season. In parallel, Unilever was undertaking trials of tomato varieties with farmers in the Tono-Vea irrigation site in the Upper East region, hoping to encourage farmers to grow improved varieties for what at the time was their processing plant in Tema. ALL became involved through a debt equity swap in which it acquired the Wenchi plant. Informal discussions led to an agreement that MoFA and GTZ would assist farmers to grow tomatoes to supply the Wenchi plant. Unilever also expressed willingness to package tomato paste from Wenchi under their brand TOMAROMA and to focus on distribution and marketing. A formal agreement was reached in February 2002. GTZ contributed €200,000 for the project's management and technical assistance to the farmers.

The District Agricultural Development Units (DADU) of MoFA in the selected districts committed to work with farmers. One half of GTZ contribution was used to finance the acquisition of 8% shares in ALL on behalf of the farmers through a Farmers Trust formed for the purpose. ALL and Unilever also contributed a minimum of €200,000 to be used mainly in the execution of their part of the project. In addition, ALL and Unilever were to finance other costs related to their operations in excess of the €200,000 already contributed.

Varietal trials were undertaken, farmer based organizations (FBOs) formed, and protocols developed to achieve yields of 20 tons per hectare. Financing was arranged for the farmers through Agricultural Development Bank (ADB). ALL also provided inputs to support production to some farmers, especially those in the Dormaa District who were refused credit because of concerns over side selling to nearby Cote D'Ivoire. ALL guaranteed all the loans to the FBOs.

MoFA extension agents in the various districts and an additional 8 staff (national service personnel from the universities and agric colleges) were recruited to assist the farmers in the implementation of the new protocols.

Despite this planning, production faced a number of challenges. A delay in the disbursement of cash to farmers by ADB meant that three districts delayed planting. The July-August 2003 drought hit most of the districts, just at the vegetative stage when water is essential. Following the drought, rainfall in September-November 2003 was higher than normal which led to a high incidence of diseases. Farmers who were able to start planting early using their own cash and ALL financing achieved average yields of over 17 tons/ha. These farmers supplied the factory during the peak period when the pre-agreed processor price was higher than the fresh market price, but the farmers diverted to the fresh market as tomato became scarce and the fresh price increased above the processor price.

Since this pilot, Wenchi has not been operating, preferring to focus on an alternative model of supplying the factory with tomato grown on ALL's own 550 acres of land. The current plan is to grow tomatoes from September 2010, during the dry season using irrigation, supplemented with ad hoc purchases from farmers. Once production and processing are stable the plan is to include contract farmers. At this stage ALL is working with five farmers, sharing technologies and experiences with them. The target is to achieve capacity throughput of 300 tons of fresh tomato per month.

Rehabilitation of Pwalugu, Upper East

The re-named Northern Star Company at Pwalugu is located in a tomato growing area with a short season of three to five months (December through April). After closing down in the late 1980s, the factory was revitalised in the mid-2000s by Ghana's government, through the Ministry of Trade and Industry (MoTI). A new local company, Northern Star Tomato Company Limited (NSTC) took over the factory, in collaboration with Trusty Foods Company Limited, an Italian company based in Tema, which provided technical and logistic support and a commitment to purchase bulk produced paste from Northern Star to be canned in Tema. The plant is designed to package only in bulk for sale to Trusty Foods in Tema, thus creating asymmetry in power and influence along the value chain as the company has to negotiate with a de facto monopsonistic buyer.

Here too farmers were encouraged to increase tomato production to supply the factory. Farmers were provided with seeds, but not fertilizers and other inputs. The company offered to buy at 15 GH¢ per crate of 110 kg, but the traders were willing to buy at twice as much, and, as expected, tomatoes were diverted to traders. When farmers were ready and willing to deliver on their contracts, Pwalugu encountered problems including insufficient crates for collecting tomatoes, insufficient transport network to go to the farmgates, and lack of cash to pay the farmers. Not surprisingly, the little trust between farmers and processors eroded after this experience and Pwalugu shut down once more.

Recently, the National Vegetable Growers Association worked through the regional minister to have the Pwalugu plant restarted. The parliamentary sub-committee for agriculture also became involved by setting up a committee of three actors, ICOUR, MoFA and Northern Star, to examine and recommend a strategy to reopen the plant. After examining the operational costs of the factory and crops budgets submitted by farmers they recommended that tomatoes be purchased at GH¢ 5.40 per crate of 40kg, plus transportation costs from farmgate to factory. The political imperative for re-opening Pwalugu for the 2009-10 tomato season, in the Upper East region (which typically runs from December through April), has been emphasized by a number of ministerial and regional visits. In late 2009, MoTI assured farmers that the factory

would open that upcoming season, with MoTI negotiating with financial institutions for credit to support Pwalugu's tomato purchases. Although the factory did manage to start processing in March, part way through the 2009-10 season, by this point many farmers would have already harvested. How much was procured is not clear.

In November 1997, the Natural Resources Institute in the UK (NRI) Integrated Food Crop Systems Project (IFCSP) and the Biochemistry Department of the Kwame Nkrumah University of Science & Technology, Kumasi, initiated a research on the production of tomato paste through low-cost and safe technologies under the supervision of Ellis. NRI and ADRA Ghana (Techiman Office) collaborated for a scale-up of the technology at Tuobodom near Techiman (Techiman Municipal Assembly) of Ghana. A small plant was established and actual trials and production tests carried out. The plant has been closed down as of now.

There has been less commitment by the government to small-scale processing, which tends to be in the informal sector. In 1992, a feasibility study into the establishment of a food processing plant to process tomato at Derma, in the Tano south district of the Brong Ahafo region, was commissioned by the UNDP/ILO/DRHC, under the auspices of the Department of Rural Housing and Cottage Industries, at the request of the Derma Vegetable Growers Association Limited. The feasibility study concluded that there was enough local tomato production to support the establishment of a 1,200 litres/day (120 crates of 52kg tomato fruits) processing mill (a multi-purpose juice extractor) to produce paste and puree. Other fruits such as mango and orange could be processed by the mill during the tomato off-season (March –June). The report calculated an internal rate of return of 76%. The mill was intended to act as a service centre where clients (farmers) would bring their fruits for processing (charged on a crate basis). Further discussions with the regional officer of the NBSSI at Sunyani revealed that the project was then on hold having originally stalled through lack of financing (although some processing equipment had been bought and plant established). In an attempt to revise the project, NBSSI sought assistance from the Commonwealth Secretariat. A consultant visited in 1997 and advised on the partially built plant. Another consultant was expected in 1998 to assess the economic feasibility of the project (IFCSP). However, to date the plant has never started operating (Awiti-Kuffuor report to IFPRI). The operation of the factory was to guarantee a ready market for tomato producers as well as save tomatoes that otherwise would have gone bad because of lack of storage facilities.

Enabling environment for processing

In its drive to develop a linkage between agriculture and industry, and to improve on export earnings, the government has put in place certain incentive schemes to attract investors to go into agro-processing. These include a tax holiday for certain industries in the agriculture and agro-processing business, and lower taxes based on the location of the industry; with less tax for factories in the other regions and rural areas compared to Accra-Tema area.

Although import tariffs would enable Ghana's tomato processors to be more competitive, Ghana is constrained by WTO, the Economic Partnership Agreement (EPA), and its membership of ECOWAS, which aims to have a "common external tariff" throughout the area (although the ECOWAS treaty is based on the removal of duties and equivalent taxes, this has not yet occurred, and countries within ECOWAS continue to impose such duties on other ECOWAS countries). Ghana is also likely to be affected by the EPA, an agreement between ECOWAS and the EU, which removes Ghana's option of using tariff adjustments (permitted by the WTO) to mitigate trade problems (such as dealing with subsidized EU tomato paste imports) with respect to trading with the EU (Asuming-Brempong and Asuming Boakye, 2008; ECOWAS). Therefore, in the current climate, Ghana is unlikely to be able to implement tariffs to protect domestic tomato production.

Public goods

Ghana's government has made a number of investments in the agriculture sector that have directly affected tomato farmers. The construction of dams in the northern regions in the early 1970s, improved road systems, and the establishment of local markets in the 1970s and 80s, enabled farmers to sell surplus vegetables for cash and this became an increasingly important form of income generation. As a result, production expanded quickly. Yet commitment to the tomato sector as a whole has not to date been strong, with little emphasis on improving production and productivity.

NRI research into seed varieties

A research team led by the Natural Resources Institute in the UK (NRI) conducted a research project in the Brong Ahafo region in Ghana between 1994 and 2000. The project focused on pure line selection of vegetable landraces, including tomato, aiming to produce a source of pure strains of particularly good open-pollinated varieties because it was observed that most farmers could benefit sufficiently from modern varieties to justify the high price demanded for their seeds. Six varieties (three local and three introduced) were identified that were preferred by farmers and traders. Qualities that were valued in these varieties included fruit quality, taste, and shelf life. A tomato breeder seed production trial was established seemingly successfully at Wa in the Upper West region with five of the selected varieties. The expectation was that the Varietal Release Committee of Ghana would supervise a trial as part of the variety registration process leading to the registration of Ghanaian tomato varieties. Yet these varieties were never released. The project documentation stated clearly that "outputs [of the project] will have minimal impact unless sustainable seed distribution systems are in place to ensure that resource-poor farmers (particularly in rural areas) have access to newly developed material" (Orchard and Suglo 1999).

This research project appears to have been a well implemented action research project that has not resulted in any long-term impact because of a lack of follow through. Since this project, there have been no breeding programs, and no systematic seed multiplication in the country. Currently all improved seeds are imported into the country, and there are insufficient quality controls. However, Power Rano (a cross between the Power and Laurano varieties), identified by NRI researchers in the 1990s as having good properties for production and local processing, has remained popular in Brong Ahafo where the NRI project was located.

Other interventions

TIPCEE, the Trade and Investment Programme for Competitive Export Economy, funded by USAID and implemented by Chemonics International and Care International, sought "exponential growth in sales of agricultural exports between 2005 and 2009". Tomato was chosen as one of the target crops in part because of the perceived strong market linkages with downstream processors, and well established trading networks at the regional level. Their efforts were targeted at increasing productivity and introducing smaller crates and grading of tomatoes.

Current government priorities in the agricultural sector and vegetables in general

The Government of Ghana's agricultural policy is currently focused on increasing agricultural production and productivity to improve food security by ensuring that the food supply meets the population's needs and increases the net incomes of primary producers. Although tomato has been neglected somewhat by extension services in Ghana, which have tended to focus on

staples and food security, the more recent emphasis of the government's agricultural policy is the creation of competitive private sector businesses that will ensure employment and increased incomes, with particular emphasis on the rural poor (Gallat Associates 2003).

Further, more recently, MoFA has shown renewed interest in tomato, for example, with Monney et al.'s (2009) baseline survey of twelve tomato production districts in Ghana, undertaken by MoFA's Horticulture Development Unit, within the Directorate of Crop Services and Post Harvest Management Unit.

Other countries have taken initiatives to improve the tomato sector. These include the introduction of standardized weights and measures in neighboring countries such as Burkina Faso, Cote d'Ivoire, and Togo, that have improved efficiency and transparency in the marketing system; and concerted and coordinated efforts at the domestic research institutions or universities to undertake varietal selection for tomatoes for both the fresh and processed markets.

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